

Remarks

Claims 35-39, 41-45, 50-55, 60-64, 66-73 are pending in this Application. Claims 40, 46-49 and 56-59 have been previously canceled without prejudice. Claim 50 is withdrawn and remains eligible for rejoinder if it depends from or otherwise requires all limitations of an allowable claim [MPEP 821.04]. Claim 50 may also constitute a linking claim, eligible for rejoinder. Claims 35, 51, 60 and 63 have been amended and find support throughout the specification, such as at paragraphs [0017], [0018], [0025], [0034], [0040] of the published application, as examples. Applicant respectfully requests acceptance of the amended claims, as no new matter has been introduced with said amendments. New claim 74 has been added and finds support in the originally filed specification, such as paragraph [0039] and [0046].

Amendments to the specification are included to correct typographical errors. Applicant respectfully submits that no new matter has been introduced with the amendment to the specification and respectfully requests entry of the amendment.

On page 2 of the Office Action, the Examiner rejected Claims 35-39, 41-45, 51-55 and 60-73 under 35 U.S.C. 112, first paragraph, and 35 U.S.C. 132. For Claims 35, 36, 38, 51, 60, and 63, the Examiner rejected the term “crystalline” by further stating,

“Applicants do not have support for any or all crystalline siliceous material but only specific crystalline siliceous materials including silica sand, quartzite dust and activated silica, clay...Applicants thus only have literal support for those specific crystalline siliceous material but not every, any, or all crystalline siliceous materials they do not mention.”

Applicant respectfully disagrees with the suggestion that the specification must have literal support for subject matter in order for it to be considered adequately supported by the specification. For example, the MPEP states that “newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure.” [MPEP 2163] Applicant also respectfully points out that the MPEP also states that “information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter.” [MPEP 2163.06] Applicant respectfully points out that the application as filed expressly discloses, “Preferably, ground

quartz is used with a particle size . . .” (pg. 8, lines 10-11 of WO 2004/041720; which is paragraph [0041] of U.S. Publication No. 2006/0107872 A1. Applicant submits that one skilled in the art understands that quartz is another term for crystalline silica. Applicant points to Exhibit A, entitled “Crystalline Silica Primer” and the underlined section therein on page 5, in which it is stated, “some writers use the specific term quartz in place of the more general term *crystalline silica*.” As such, Applicant respectfully submits that one skilled in the art will understand from Applicant’s originally filed specification that the application as filed does adequately describes subject matter in the claims, such as the term “crystalline silica.” Applicant further submits that the specification as originally filed does provide support for the invention as it is now claimed in independent Claims 35, 50, 51 and 60 (and including its dependent claims).

Claims 42 and 67 are rejected for the phrase “and mixtures thereof.” Applicant respectfully points out that a suspension agent is expressly disclosed in the originally filed specification as including one or a number of agents, as is apparent by the written phrase “or a combination thereof” that appears both on pg. 7, line 9, of WO 2004/041720 (which is paragraph [0034] of U.S. Publication No. 2006/0107872 A1) and also at pg. 8, line 6 of WO 2004/041720 (which is paragraph [0040] of U.S. Publication No. 2006/0107872 A1) when referring to suitable suspension agents.

Claim 63 is rejected for the phrase “and mixtures thereof.” Applicants respectfully point out that the originally filed specification expressly states that a suspension agent forms a suspension or gel when contacted with the calcareous material, the siliceous material, or water and thereby hold the reactant particles (silica and lime) in suspension (see pg. 7, lines 2-6, of WO 2004/041720; which is paragraph [0034] of U.S. Publication No. 2006/0107872 A1). Thus, Applicant submits that the specification as originally filed does provide support for the invention as it is now claimed in Claim 63. In addition, pg. 4, lines 14-15 of WO 2004/041720 (which is para. [0017] U.S. Publication No. 2006/0107872 A1) discloses that the suspension agent forms a gel upon contact with the calcareous material and/or siliceous material, and/or water. Thus, Applicant submits that the specification as originally filed does provide support for the invention as it is now claimed in Claims 42 and 67.

On page 3 of the Office Action, the claims are rejected on the ground of nonstatutory obviousness-type double patenting (ODP) as being unpatentable over claims in U.S. Patent No. 6,506,248 and U.S. Patent No. 6,346,146. Applicant traverses the rejection stating that the claims are not identical and respectfully requests the ODP rejection be held in abeyance until there is allowable subject matter with the application.

On page 4 of the Office Action, the Examiner rejected Claims 35-39, 41-45, 51-55 and 60-73 under 35 U.S.C. 112, second paragraph, for including terms, such as “predetermined” and “little.” Applicant has amended the language and removed the terms as requested by the Examiner. Applicant respectfully requests acceptance of the amended claims, as no new matter has been introduced with said amendments.

On page 5 of the Office Action, Claims 35-39, 41-45, 51-55 and 60-73 are rejected under 35 U.S.C. 103(a) and being unpatentable over the following references:

U.S. Patent No. 1,932,971 (hereinafter, “Hüttemann”);
U.S. Patent No. 3,231,657 (hereinafter “Kalousek”);
U.S. Patent No. 4,477,397 and 4,523,955 (hereinafter “Helser”);
U.S. Patent No. 5,330,573 (hereinafter “Nakano”);
U.S. Patent No. 3,501,324 (hereinafter “Kubo”); and
U.S. Patent No. 4,388,257 (hereinafter “Oguri”).

Applicant respectfully addresses each of the references below.

Hüttemann expressly teaches preparing a *solid* block for insulation. The block is made by preparing a suspension which requires adding only a finely pulverized siliceous materials with a finely pulverized binder (i.e., calcareous material) and an excess of water. Hüttemann does not teach or suggest a suspension agent nor a suspension agent that is added prior to reacting a calcareous material and a crystalline siliceous material. Hüttemann also does not specify that the siliceous material is crystalline. Furthermore, Hüttemann does not teach or suggest that any suspension agent is added to permit the reaction to take place without agitation. Moreover, and possibly because Hüttemann omits a suspension agent from its mixture, Hüttemann makes clear that the mixture is pre-hardened by subjecting to steam and pressure (or supersaturated steam) so that it exhibits “thixotrophism,” which means that the pre-

hardened mixture becomes a fluid (softer mass) when shaken (pg. 2, ll. 32-4 and ll. 45-46). In addition, it is pointed out that Hüttemann's resultant calcium silicate hydrate is not stated to be in a semi-dry powder form but to form blocks for heat insulation. Accordingly, Applicant respectfully submits that Hüttemann does not teach or suggest the claimed method (or product produced by the method) because each and every element of the claimed invention or the invention on its whole is not supported, taught or suggested by Hüttemann.

Kalousek, like Hüttemann expressly teaches a method of making a *solid* for insulation. The solid is taught expressly as formed after reacting a slurry of lime and silica and fiber under elevated temperature and pressure with superheated steam. Like Hüttemann, Kalousek also does not teach or suggest a suspension agent nor a suspension agent that is added prior to reacting a calcareous material and a crystalline siliceous material (i.e., the lime and silica of Kaousek). Kalousek does not specify that the siliceous material is only crystalline (see Example I). Furthermore, Kalousek does not teach or suggest that any suspension agent is added to permit the reaction to take place without agitation because Kalousek does not teach adding a suspension agent. The final product of Kalousek is a solid that will crack (Col. 3, ll. 47-54) and is not stated or suggested to be in a semi-dry powder form. Accordingly, Applicant respectfully submits that Kalousek does not teach or suggest the claimed method (or product produced by the method) because each and every element of the claimed invention or the invention on its whole is not supported, taught or suggested by Kalousek.

Helser expressly teaches a *solid* crystalline fiber-containing fiber cement product. The solid is made from a slurry that requires a siliceous material, a calcarious material and cellulose fibers with or without alkali-resistant glass fibers and "particulated greenware," which is a previously molded calcium silicate hydrate (CSH) slurry product in a particulated form. The greenware is also made of a calcarious material, siliceous material, reinforcing fibers and water (Col. 1, ll. 37-62; Col. 3, ll. 34-49). Helser does not specify that the siliceous material is only crystalline (see Example). The greenware of Helser may reduce gelation time but the making of the solid product of Helser requires agitation because the slurry is agitated with an agitator (Col. 3, ll. 50-52), poured in to a mold and shaped by filter press molding to dewater (Col. 3, ll. 65-66). A solid article/block is formed after autoclaving. Hence, Helser does not teach or

suggest that a suspension agent is added or one that permits the reaction to take place without agitation. Moreover, Helser does not teach or suggest that the resultant calcium silicate hydrate is in a semi-dry powder form. Accordingly, Helser does not teach or suggest the claimed method (or product produced by the method) because each and every element of the claimed invention or the invention on its whole is not supported, taught or suggested by Helser.

Oguri expressly teaches a *solid* fiber-containing product. The product is made by mixing together a water slurry of a siliceous source and a water slurry of a calcareous source in heat “under stirring” and it is expressly stated that “it is necessary to maintain the reaction system in a liquid condition” as an aqueous slurry (Abstract; Col. 2, ll. 37-42; Col. 3, ll. 22-25). To the liquid slurry is then added reinforcing fibers of asbestos, glass or rock wool, which is then press filter molded (Col. 3, ll. 29-44). The molded product is cured and forms a solid product. Oguri does not specify that the siliceous material is only crystalline (see Col. 2, ll. 24-25 wherein it is expressly stated, “It is preferable to use an amorphous siliceous source such as diatomaceous earth.”). In addition, Oguri does not teach or suggest a suspension agent nor a suspension agent that is added prior to reacting the calcareous slurry with the siliceous slurry. Furthermore, Oguri does not teach or suggest that a suspension agent is a reactive gel forming agent that forms a gel upon contact or that a suspension agent is added that permits the reaction to take place without agitation. Moreover, Oguri does not teach or suggest that the resultant calcium silicate hydrate is in a semi-dry powder form. Accordingly, Oguri does not teach or suggest the claimed method (or product produced by the method) because each and every element of the claimed invention or the invention on its whole is not supported, taught or suggested by Oguri.

Nakano expressly teaches a *solid* fiber-containing product. Forming the product requires a mixing together of two types of silica that ends up including a combination of both amorphous and crystalline siliceous material. Without the combination of both amorphous and crystalline siliceous material, Nakano states that the molded product will not be suitable or desirable (Col. 3, ll. 38-45). However, the crystalline siliceous material is not added during the gelation period. Instead, a calcareous material is first mixed with amorphous silica in water, the ratio of calcareous to amorphous silica material is said to be greater than 0.8 or there will be

no gelation (Col. 4, ll. 10-28). Gelation is said to proceed with intermittent mixing (Col. 4, ll. 49-50) after which crystalline silica and glass chopped fibers are added to dilute the mixture, followed by further mixing, addition of further water and further mixing with a mixer (Col. 4, ll. 51-60). The calcareous material to final silica material ratio is preferably 0.7 to 0.85 and cannot be less than 0.6 (Col. 3, ll. 50-59). The final diluted mixture is put into a metal mold and pressed, which is followed by autoclaving. The product formed is solid and not in a semi-dry powder form. As such, Nakano does not specify that the siliceous material is only crystalline and in fact requires only amorphous silica for gelation. In addition, Nakano does not teach or suggest nor a suspension agent that is added prior to reacting the calcareous material and a crystalline siliceous material. Furthermore, Nakano does not teach or suggest that a suspension agent is added that permits the reaction to take place without agitation. Moreover, Nakano does not teach or suggest that the resultant product is in a semi-dry powder form. Accordingly, Nakano does not teach or suggest the claimed method (or product produced by the method) because each and every element of the claimed invention or the claimed invention on its whole is not supported, taught or suggested by Nakano.

Kubo expressly teaches the production of an *aqueous slurry*. The aqueous slurry formed is prepared by making an initial slurry of silica and lime and reinforcing fibers of asbestos, rock wool, or glass (Col. 2, ll. 35-60). The slurry requires a specific ratio of lime to silica “with *stirring* under a saturated steam pressure...for a sufficient time to complete the reaction between lime and silica” (Col. 2, ll. 17-24, emphasis added). Kubo expressly states, “The reaction vessel used in the invention is pressure autoclave equipped with an agitator or stirrer and pressure gauge and the like pressure reactor” (Col. 3, ll. 31-33). After the starting slurry is placed in the reaction vessel, Kubo expressly states that a “desired *aqueous* slurry of hydrous calcium silicate is obtained (Col. 3, ll. 40-44, emphasis added). This resultant slurry may then be later and further molded and used for production of building boards and thermal insulating materials (Col. 3, ll. 73-75). Kubo does not teach or suggest a suspension agent nor a suspension agent that is added prior to reacting the lime and a silica. Furthermore, Kubo does not teach or suggest that a suspension agent is added that permits the reaction to take place without agitation. Moreover, Kubo does not teach or suggest that the resultant product is in a semi-dry powder form. In fact, Kubo teaches away from making a solid by expressly teaching

how to maintain the material as an *aqueous slurry* and to prevent making a hardened mass. Accordingly, Kubo does not teach or suggest the claimed method (or product produced by the method) and teaches away from the claimed invention; each and every element of the claimed invention or the invention on its whole is not supported, taught or suggested by Kubo.

With the remarks provided above, Applicant has shown that none of the cited documents are obvious over the claimed invention. Applicant respectfully requests entry and allowance of the pending claims.

Conclusion

Applicant respectfully submits that the Application is in condition for allowance, and pursuant to the filing of this paper and accompanying documents, Applicant earnestly seeks allowance of the pending claims as provided in the Listing of Claims beginning on page 3 of this paper.

Should the Examiner have questions, comments, or suggestions in furtherance of the prosecution of this Application, please contact Applicants' representative at 214.999.4330. Applicants, through their representative, stand ready to conduct a telephone or in-person interview with the Examiner to review this Application if the Examiner believes that such an interview would assist in the advancement of this Application.

This paper is submitted concurrently with a Request for Continued Examination and the appropriate fees. Fees for the proper extension of time are also submitted. In the event that any additional time is needed for this filing, or any additional time in excess of that requested, please consider this a petition for an extension of time for any needed extension of time pursuant to 37 C.F.R. § 1.136 or any other section or provision of Title 37. Applicants respectfully request that the Commissioner grant any such petition and authorize the Commissioner to charge Deposit Account No. 07-0153 of Gardere Wynne Sewell LLP and to reference Attorney Docket No. 129843-1022. Please credit any overpayments to this same Deposit Account.

This is intended to be a complete response to an Office Action mailed on the date of December 7, 2009.

Please direct all correspondence to the practitioner listed below at Customer No. 60148.

Respectfully submitted,

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